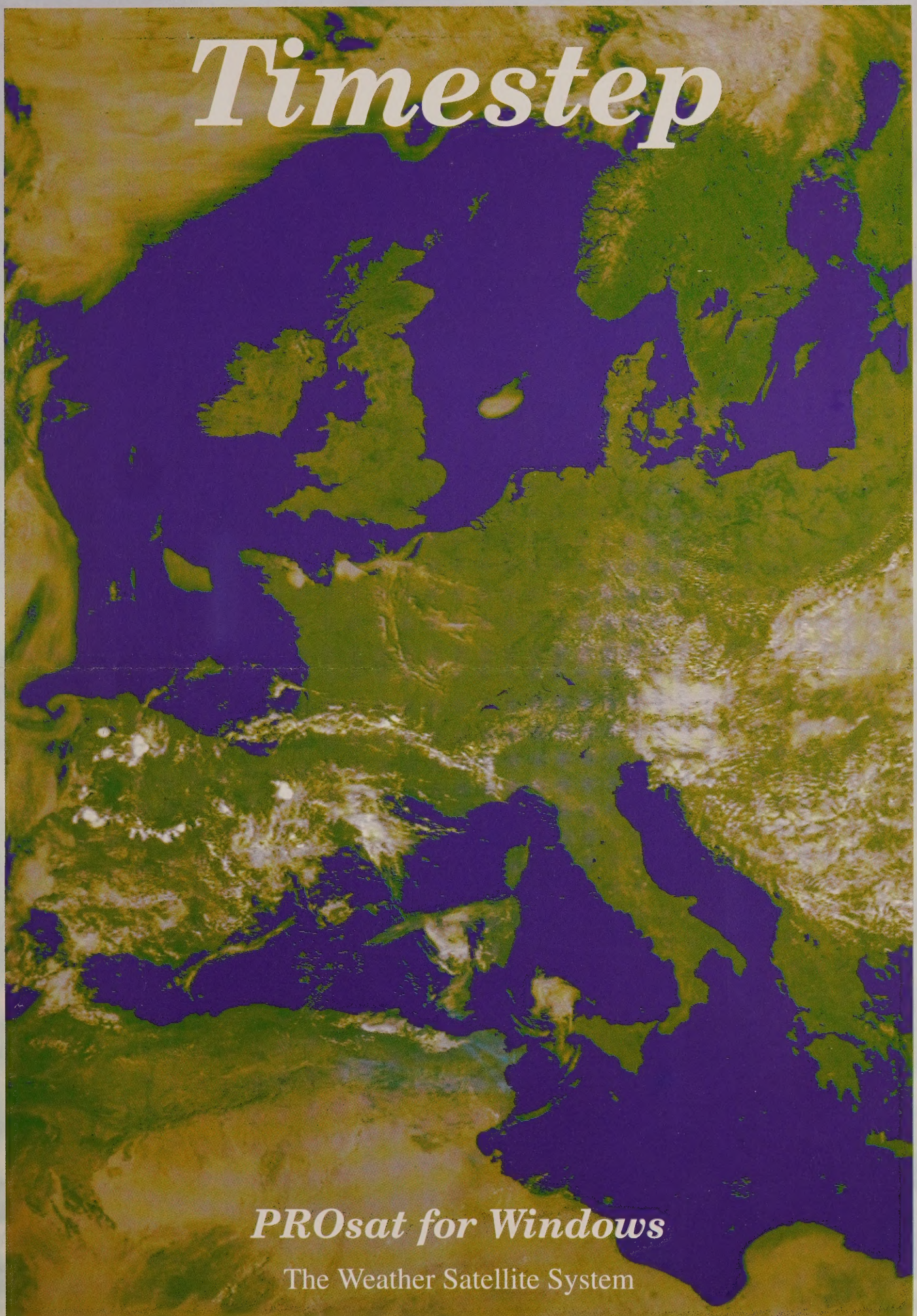
Timestep



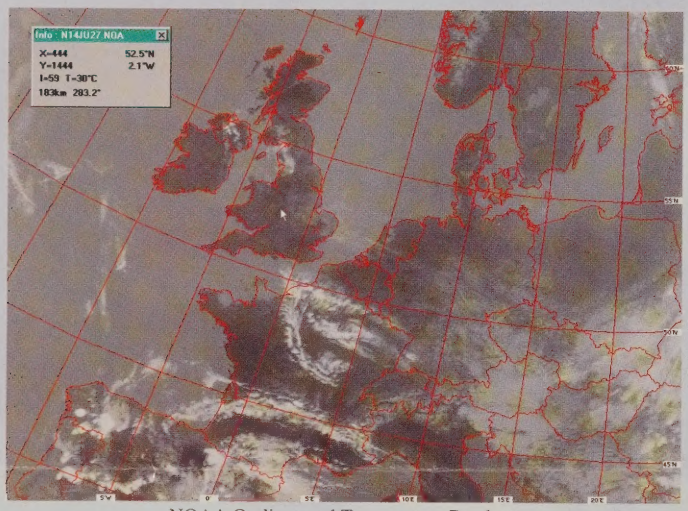
PROsat for Windows

The Weather Satellite System

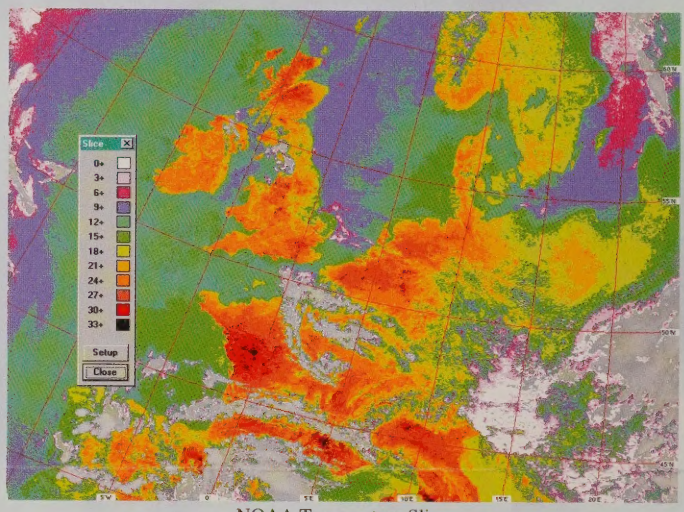
NOAA false colour visible image

NOAA Gridding

NOAA composite image (processed with Multispectral View II)



NOAA Outlines and Temperature Readout



NOAA Temperature Slice

PROsat for Windows is the very latest in weather satellite reception systems. You can now receive live up-to-date weather images on your computer in the best possible quality. With user friendly Windows software and some easily installed hardware, it is possible to obtain stunning images from all current satellites, from anywhere in the world.

You can watch hurricanes and tropical storms develop, measure land, sea and cloud temperatures, see polar ice melting and breaking up, and much more. With the innovative Windows software, you can even do all of these things at once.

The images on this page are from the NOAA and Meteor polar orbiting satellites. All current polar satellites including the Russian Okean series are supported.

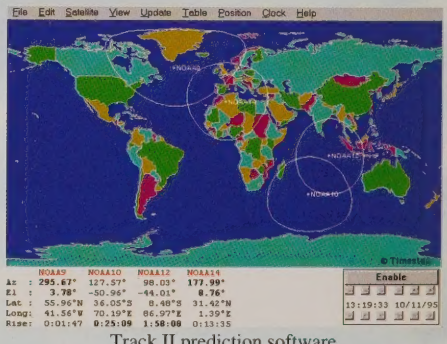
Polar Orbiting Satellites

Polar orbiting satellites are in low orbits which pass close to the poles about every 100 minutes. Each satellite passes over most countries twice a day, at a different time each day. They can be received using a simple fixed antenna. Because of their low altitude, greater land detail can be resolved, as these images show.

NOAA / Polar Features

Images saved as high resolution data in 5MB file
Visible and Infrared viewable simultaneously
Temperature readout with no calibration needed
Latitude and Longitude gridding
Land outlines and country boundaries
User location shown on image
Distance and Bearing between any two points
Temperature slice for ice floe studies etc
Scheduling and Autosave
Automatic channel switching (internal card only)

To determine when polar satellites can be received, the Windows version of our best-selling Track II prediction program is included. This lets you see the positions of up to six satellites simultaneously, in real or future time. You can even run the reception software at the same time to see where the satellite is as you receive it.

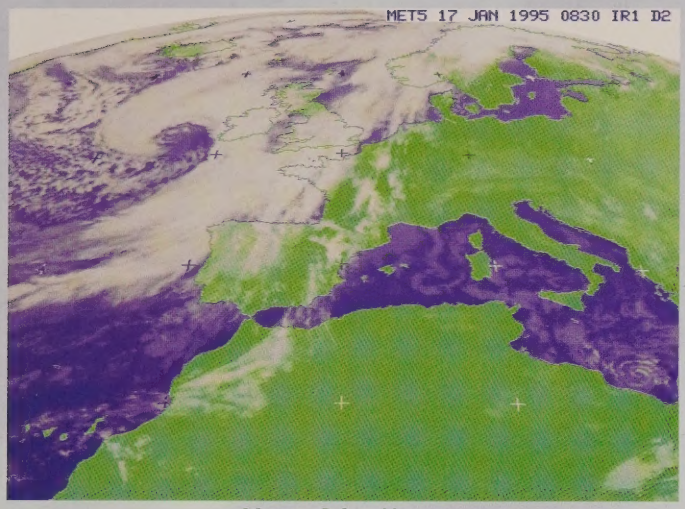


Track II prediction software

Meteor image showing ice off the Greenland coast

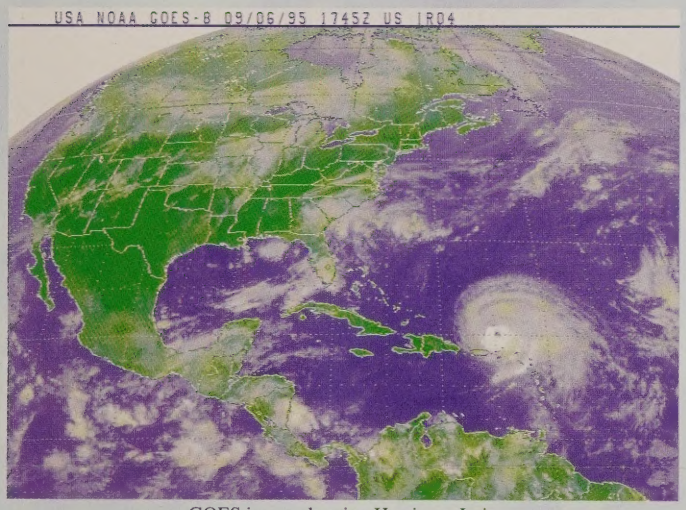
NOAA visible close-up of Denmark

NOAA infrared image of the Mediterranean

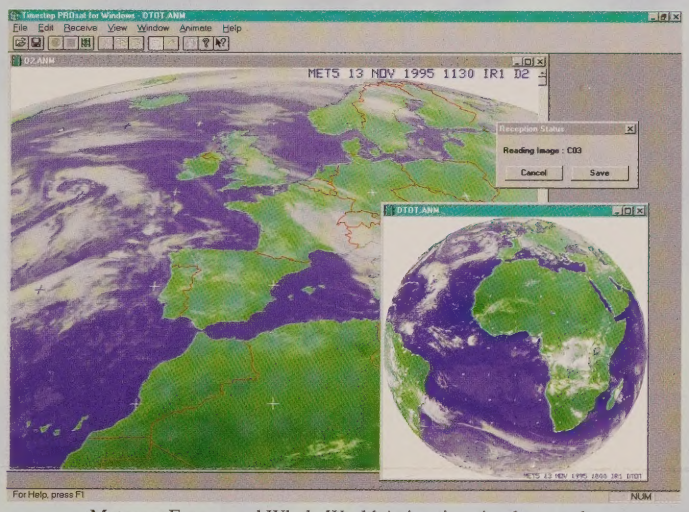


Meteosat Infrared image

Eastern Mediterranean and the Middle East visible Meteosat image



GOES image showing Hurricane Luis



Meteosat Europe and Whole World Animation simultaneously

Geostationary Satellites

Meteosat, GOES and GMS are geostationary satellites; they orbit at the same rate as the earth's rotation and hence appear to be fixed in the sky. Images are therefore available continuously, as frequently as every 4 minutes. A small dish antenna is required; this needs a clear view of the satellite.

Using the PROsat for Windows software, geostationary images can be received, displayed and animated automatically in full colour. Other features include 3D projection, image processing, country boundaries on Meteosat images, and, for the first time, temperature calibration of Meteosat images.

Animation

Because geostationary satellites always have the same view of the earth, images of the same area are transmitted many times a day (as often as every 30 minutes for Meteosat). These images can be shown in quick succession as an animation sequence, which shows the movement of clouds and makes short-term forecasting relatively simple.

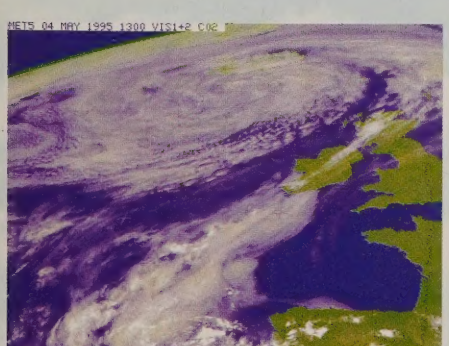
With a fast computer and plenty of memory, you can even animate two or more images at once. All of this is completely automatic, with no user intervention required.

Geostationary Software Features

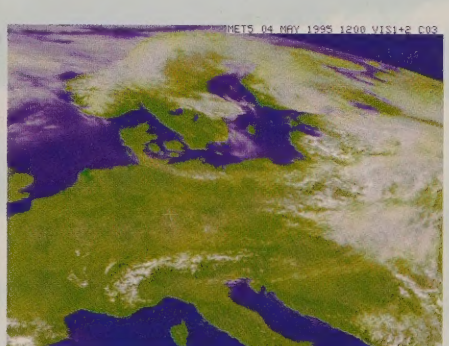
Images received in full colour
Animate and receive every frame in full colour
Animate multiple areas in full colour
Up to 1000 frames per sequence
Complete image stored in animation mode
3D Display option
Temperature readout and colour slice (Meteosat)
Country boundaries on Meteosat images

General Features

User friendly Windows software
High 4.8 kHz sampling for improved resolution
Multiple image windows (Geostationary, Polar, Animation) visible simultaneously
View one image while receiving another
Print in greyscale or colour on any Windows-compatible printer
BMP file save for further processing



Meteosat visible image of Western Europe



Meteosat image of Central and Eastern Europe

Meteosat Temperature Readout

PROsat for Windows follows Timestep's philosophy of a truly modular design concept. Complete systems are available with everything supplied right down to connectors being fitted to all cables. Upgrades for old systems and individual parts can be purchased separately.

Geostationary Dish

(Shown on optional groundstand)

90cm (3 foot)
1690 - 1710 MHz
Prime focus
Linear adjustable polarisation
Gain 22.5 dBi
Return loss 20 dB
N type termination
Pole mount and optional ground stand

Geostationary Low Noise Amplifier

1690 - 1710 MHz
0.45 dB noise figure
35 dB gain
N type input connector
F type output connector
Voltage co-ax fed 8 - 14 V
Current 80 mA
IP67 waterproof enclosure

Geostationary Receiver

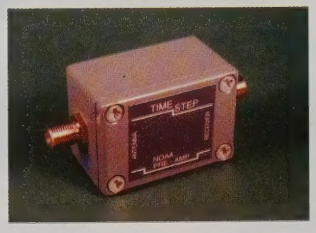
Receivers available for Meteosat, GOES, GMS, GOMS, Elektro and INSAT
Input 1691/1694.5 MHz
Output Audio (no polar receiver required)

Input connector F type
Output connector 5 pin DIN
Voltage 10 - 14 V
Current 400 mA
Co-ax feed to LNA
IF Bandwidth 30 kHz
Threshold extension
Quadrature demodulator
Audio output 100 mV RMS 600 ohm
Signal to noise (weighted) 60 dB

Polar Antenna

Crossed dipoles and reflectors
Right Hand Circularly polarised
136 - 138 MHz
6.0 dBi gain
1m cable and F connector
Omnidirectional pole mount

Polar Preamplifier



Input 136 - 138 MHz
Noise figure <1.0 dB
Gain 14 dB
6 pole RF filtering
Voltage co-ax fed 8 - 14 V
Current 20 mA
Input/output connectors F type

Polar Receiver

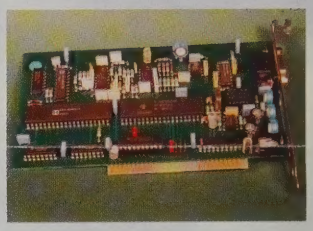
137.30 137.40 137.50 137.62 137.80 137.85 MHz
Two spare channels
Auto scanning with selective lock-out
Computer control of reception channel (PC card only)
Sub carrier mute
Input connector F type
Output connector 5 pin DIN
Voltage 10 - 14 V
Current 200 mA
Co-ax feed to preamplifier
IF Bandwidth 50 kHz
Threshold extension
Quadrature demodulator
Audio output 100 mV RMS 600 ohm
Signal to noise (weighted) 60 dB

Serial Interface

Input selection for Polar and Geostationary receivers
Built in monitor loudspeaker
Doppler correction for straight edges
Tape input/output (needs extra cables)
Status LED's
Can be used at remote sites with Notebooks
Serial output at 57.6 kbps

Internal card Interface

Input selection for Polar and Geostationary receivers
Built in amplifier for monitor loudspeaker
Doppler correction for straight edges
Control of receiver channel on Geostationary and Polar receivers
Tape input/output (needs extra cables)



Computer requirements

486 SX or better
20 MB hard disk space
Windows 3.1 or newer
Spare serial port (16550 preferred) for external interface, or Spare 8 bit slot for internal card
4 MB RAM (or more)
Super VGA (800x600x256 or better)

Issue 1 20th November 1995

Timestep PO Box 2001 Newmarket CB8 8XB England Tel. 01440 820040 Fax. 01440 820281

Distributed in the USA by : Spectrum International Inc. PO Box 1084 Concord Mass. 01742 Tel. (508) 263-2145 Fax. (508) 263-7008